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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,088	10/10/2001	Marie B. Connett-Porceddu	2411-110	4800
6449	7590	11/17/2004	EXAMINER	
ROTHWELL, FIGG, ERNST & MANBECK, P.C. 1425 K STREET, N.W. SUITE 800 WASHINGTON, DC 20005			BAUM, STUART F	
		ART UNIT	PAPER NUMBER	
		1638		

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/973,088	CONNELL-PORCEDDU ET AL.
	<b>Examiner</b> Stuart F. Baum	<b>Art Unit</b> 1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

- 1) Responsive to communication(s) filed on 09 August 2004.
- 2a) This action is **FINAL**.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

- 4) Claim(s) 1-9, 11-43 and 45-62 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-9, 11-43, and 45-62 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_

### **DETAILED ACTION**

1. The amendment and 1.132 Declarations from Marie B Connell-Porceddu, Michael R. Becwar, David S. Canavera, and James E. Mann filed 8/9/2004 have been entered.
2. Claims 1-9, 11-43, and 45-62 are pending and are examined in the present office action.
3. Rejections and objections not set forth below are withdrawn.
4. The text of those sections of Title 35, U.S. Code not included in this office action can be found in a prior office action.

#### *New Matter*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 1-9, 11-43 and 45 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims have been amended to recite “liquid wash culture medium”. Applicants fail to point to support for the phrase in the instant specification. Upon a cursory search of the specification, support could not be found. Applicants are required to point to support for “liquid wash culture medium” or to amend the claims to delete the NEW MATTER.

***Indefiniteness***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-9, 11-43 and 45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The rejection includes dependent claims.

In claim 1, the metes and bounds of “liquid wash culture medium” have not been defined.

Applicants have not defined the constituents of the “liquid wash culture medium”.

Applicant's arguments filed 8/9/2004 have been fully considered but they are not persuasive.

Applicants contend that paragraph 31, page 9 defines this term (page 26, 5<sup>th</sup> paragraph).

The Office contends that paragraph 31, page 9 only recites a wash medium and does not address a liquid wash culture medium.

Applicants contend that paragraph 69 contains a description of a “wash medium” (page 26, 6<sup>th</sup> paragraph).

The Office contends that paragraph 69 discusses a “post-wash culture media” and not a “liquid wash culture medium”. Applicants do not specify that the wash medium is a culture medium.

Applicants contend that Example 1 discloses the use of “DCR4 liquid wash medium” to wash the cells and Example 6 discloses the use of a liquid maintenance medium as the wash medium for washing the cells (paragraph bridging pages 26 and 27).

The Office contends that the claims are drawn to a “liquid wash culture medium” and applicants arguments do not define the metes and bounds of the claimed recitation.

Applicants contend that a skilled artisan readily recognizes that a “medium” contains ingredients, such as nutrients, and is not just water (page 27, top paragraph).

The Office contends that the term “medium” does not implicitly or explicitly contain ingredients.

***103 rejection***

7. Claims 1-9, 11-43, and 45-62 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Levee et al (1999, Molecular Breeding 5(5):429-440). This rejection is maintained for the reasons of record set forth in the Official action mailed 4/8/2004. Applicant’s arguments filed 8/9/2004 have been fully considered but they are not persuasive.

Applicants contend that damage to cells is minimized by using a liquid wash medium to wash cell subsequent to Agrobacterium infection. Applicants contend that distilled water could not be used to wash the cells (page 26, 5<sup>th</sup> paragraph). Applicants contend that the recitation “a wash medium” is defined in the specification. Applicants contend that the term “medium” is a term of art and means something more than water (paragraph bridging pages 26 and 27).

Applicants contend that Levee et al do not use a liquid wash culture medium and no suggestion that use of a liquid wash culture medium would result in an enhanced transformation and regeneration of transformed embryonic tissue of hard pines (page 27, 2<sup>nd</sup> paragraph). Applicants contend that Levee et al disclose Agrobacterium transformation of white pine, which is a soft pine and not a hard pine. Applicants contend that the amended claims are clearly directed to pine

cells of the *Pinus* subgenus, which are hard pines (page 28, 2<sup>nd</sup> paragraph). Applicants contend that there have been no reports in the literature of the regeneration of plants following stable transformation of embryogenic cultures of any pines of the *Pinus* subgenus by *Agrobacterium* (paragraph bridging pages 28 and 29). Applicants contend that a feature of the invention which enables the enhanced transformation and the regeneration of transformed embryonic hard pine tissue is the use of a liquid wash medium as opposed to the use of water to wash cells following *Agrobacterium* infection or cocultivation of embryonic hard pine tissue with *Agrobacterium*. Applicants contend this feature of the invention is found in the claims (page 29, 1<sup>st</sup> full paragraph).

Applicants contend as stated in the Marie B. Connell-Porceddu Declaration, the present invention is directed to the enhanced transformation and regeneration of transformed embryogenic pine tissue in which the pine is of the genus *Pinus*, subgenus *Pinus*, which are hard pines (page 29, 2<sup>nd</sup> full paragraph). Connell-Porceddu states that the cited prior art of Levee et al disclose the transformation and regeneration of a soft pine. However, this prior art does not show the transformation and regeneration of pines of the subgenus *Pinus*, (hard pines) (paragraph bridging pages 29 and 30). Connell-Porceddu states that there is no expectation of success for using the method of transformation and regeneration of soft pines on hard pine species (page 30, 1<sup>st</sup> full paragraph and page 31, 1<sup>st</sup> full paragraph). Connell-Porceddu states that there had been no reports of the regeneration of transgenic plants of hard pines prior to the present invention and any reports at all concerning regeneration of transgenic hard pines demonstrated that regeneration was not achieved (see Wenck et al) (page 30 bottom paragraph)

Applicants contend as stated in the Michael R. Becwar Declaration, it is well accepted by those skilled in conifer somatic embryogenesis that what works for one group of pines will not work with another group of pines, i.e., hard pines versus soft pines (paragraph bridging pages 31 and 32).

Applicants contend as stated in the David S. Canavera Declaration, there was a long-felt need to develop improved methods of *Agrobacterium* transformation of hard pines and improved selection of transformed tissue and methods to regenerate *Agrobacterium*-transformed hard pines. Canavera contends that the method of Levec et al is not able to be used for regeneration of transgenic hard pines (page 32 1<sup>st</sup> full paragraph to page 33, 2<sup>nd</sup> paragraph).

Applicants contend as stated in the James E. Mann Declaration, ArborGen licensed the present application and companion application 09/973,089 and that ArborGen is actively using the methods claimed in these applications and have transformed plants in field trials (page 34, 1<sup>st</sup> full paragraph).

In response to Applicants' arguments that the reference fails to show certain features of Applicants' invention, it is noted that the features upon which Applicants rely (i.e., washing cells with DCR4 culture medium or any medium comprising nutrients, hormones, and an osmoticum) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

8. No claims are allowed.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stuart F. Baum whose telephone number is 571-272-0792. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson can be reached on 571-272-0804. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1600.

Stuart F. Baum Ph.D.  
Patent Examiner  
Art Unit 1638  
November 12, 2004

  
ELIZABETH McELWAIN  
PRIMARY EXAMINER